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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,824	04/14/2004	Rolf Ebert	EBERT-1	5632

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EXAMINER	
MAFAHER, NINA YASMIN	
ART UNIT	**PAPER NUMBER**
2855	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/823,824	EBERT, ROLF	
	Examiner	Art Unit	
	Nina Y. Mafaher	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Axe (6,609,410).

With respect to Claim 1, Axe discloses a method comprising the step of deforming a sample body by impacting the sample with a weight (Column 4, lines 5-8); measuring a movement of a weight over time during a deformation of said sample body, and generating a path signal based on the movement of the weight, wherein the path signal is proportional to the deformation of the sample body (Column 4, lines 9-15); measuring a reaction force of the sample body over time during the deformation of the sample body, and generating a force signal, wherein the force signal is proportional to the reaction force (Column 4, lines 11-12); and processing and evaluating the path signal and the force signal with a computer (Column 4, lines 25-28).

With respect to Claim 2, Axe teaches dropping a weight onto a sample body from a pre-determined height (Column 2, lines 60-62 & Column 3, lines 33-35).

With respect to Claim 3, Axe discloses a weight impacting a sample body in a free fall (Column 2, lines 60-62, Column 3, lines 51-52).

With respect to Claim 4, Axe teaches that the impacting weight may be driven by a hydraulic or spring actuator, thus the velocity of the weight can be regulated (Column 3, lines 49-51; Column 4, lines 5-8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5, 6, 7, 10, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axe (6,609,410) in view of Pringiers (4,383,450).

With respect to Claim 5, Axe teaches a force measurement device for measuring the reaction force of a sample body during deformation (Column1, lines 52-53); a sample table disposed on a force measurement device (Column 1, lines 55-56); and a path sensor for detecting a movement of a weight wherein a path signal is proportional to the deformation of the sample body (Column 1, lines 59-60; Column 4, lines 12-15) and a force signal is proportional to the reaction force (Column 1, lines 58-59; Column 4, lines 11-12) and the path signal and force signal are measured and evaluated (Column 4, lines 25-28).

Axe fails to teach a guide disposed above a sample table wherein the guide is for guiding a weight which impacts a sample body. Pringiers discloses a guide disposed

above a sample table wherein the guide is for guiding an impression body which impacts a sample body (Figure 2, #6; Column 5, lines 20-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the measurement device of Axe with that of Pringiers for the purpose of providing a guide for the impacting weight, since the height from which the weight is dropped can be better determined, and the weight can be sure to impact the sample at the desired location rather than the weight moving horizontally and impacting the sample in an undesirable way.

With respect to Claim 6, Axe and Pringiers teach the invention set forth above and Axe further teaches a computer coupled to the force measurement device and path sensor (Figure 3, #30; Column4, lines 25-28).

With respect to Claim 7, Axe and Pringiers teach the invention set forth above and Axe further teaches a force measurement device comprising a load cell (Column 4, lines 11-12).

With respect to Claims 10 and 11, Axe and Pringiers teach the invention set forth above and Pringiers further teaches a linear guide (Figure 2, #6; Column 5, lines 20-21) which comprises a lever (Figure 2, #11) wherein a weight is disposed on the lever and the lever rotates about an axis of rotation (Figure 2, #15).

With respect to Claim 12, Axe and Pringiers teach the invention set forth above, however they fail to teach a device wherein the height of the axis of rotation is adjustable. However, Pringiers does teach that the sample table is adjustable in height (Column 5, line 41). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the device of Pringiers so that the height of the axis of rotation is adjustable rather than the height of the sample table for the purpose of minimizing or maximizing the space between the sample table and the weight where the sample is to be arranged, since it can be reached as well as possible, substantially independently from the size and shape of the test sample (Column 8, lines 33-37).

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Axe (6,609,410) in view of Pringiers (4,383,450), and further in view of Thomas (6,161,422).

Axe and Pringiers teach the invention set forth above, however they fail to teach the device further comprising a separate spring system and a mounted load cell. Thomas discloses a load cell mounted under a spring system (Column 2, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the load cell of Axe with that of Thomas for the purpose of measuring a force, since the load cell has a maximum load capacity which may be lower than the force applied to it and in order to prevent damage to the load cell during impact, a spring system is used such that the spring deflects sufficient pressure to prevent damage to the load cell (Column 2, lines 2-12).

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Axe (6,609,410) in view of Pringiers (4,383,450), and further in view of Clegg (6,755,087).

Axe and Pringiers teach the invention set forth above, however they fail to disclose the load cell as inherently resilient. Clegg teaches that generally a load cell is

formed in a resilient body (Column 1, lines 9-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the load cell of Axe with that of Pringiers for the purpose of measuring force, since one of the main advantages of a load cell is the lack of mechanical parts that are responsive to applied loads and therefore subject to wear from repeated use. The rendering of repeatable and accurate readings by a load cell relies primarily with its structural integrity, and therefore its ability to return to its original shape and position (Column 1, lines 21-26).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Axe (6,609,410) in view of Pringiers (4,383,450), and further in view of Lee (5,739,411).

Axe and Pringiers teach the invention set forth above, however, they fail to disclose a parallelogram guide. Lee teaches two guide rails parallel to each other (Figure 1, #12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the guide of Pringiers with that of Lee for the purpose of guiding the weight or impact object, since it allows the weight to be moved freely, with less frictional points than Pringier's tube like guide.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Axe (6,609,410) in view of Pringiers (4,383,450), and further in view of Collier (4,249,749).

Axe and Pringiers teach the invention set forth above, however, they fail to disclose a guide comprised of a scissors system. Collier discloses a cart with a pair of scissor systems that are vertically adjustable (Column 1, lines 7-9). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the guide of Pringiers with that of Collier for the purpose of guiding a load in a vertical manner, since the scissor systems are vertically adjustable for positioning at different heights for dropping and allowing the weight to be retracted easily after impact.

Drawings

9. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the spring system (Claim 9), the lever and axis of rotation (Claim 11), parallelogram guide (Claim 13), and scissors system (Claim 14) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NYM

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